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Request for Examination

Three-layer textile web

The invention concerns a textile web from a woven, hydrophobic equipped outer layer, a middle, water vapor-permeable layer and a woven, water vapor-permeable layer. In order to indicate a textile web, with which water vapor transport is from the inside outward improved, the internal layer and the outer layer are to be connected by in-woven pile yarn, which exhibits wicking or capillary effect.

Description

The invention concerns a textile web from a woven, hydrophobic equipped outer layer, a middle, water vapor-permeable layer and a woven, water vapor-permeable layer.

Such textile webs are well-known. They are used for sport clothing, casual clothes and such a thing. During the fabrication of the well-known textile webs three layers are sewn with one another, i.e. a outer material with hydrophobic characteristics, a foil, either by perforation or by diffusion capability the water vapor phase of the liquid phase (e.g. Rain)can be separated, and a third layer, which is a liner material layer carried inside, which lets the water vapor through resulting when carrying to certain extent. With the well-known designs the water vapor transport from the internal liner material layer is determined to the outer material exclusively by the given in each case water vapor partial pressure.

Task of the invention is it to indicate a textile web of the initially described kind with which water vapor transport is from the inside outward improved.

This task is solved by the fact that the outer layer and the internal layer over in-woven pile yarn, which exhibits wicking or capillary effect are connected. The textile web according to invention is woven on looms with double work, as they are used among other things for the fabrication of pole fabrics. However the double work is not cut open. Water vapor or serves liquid absorbs the outer and internal layer connected pile yarn, which preferably consist of wool, and first as dampers from the internal layer. Due to their wicking or capillary effect they conduct water vapor or liquid to the outer layer, where the liquid evaporates or the water vapor discharges.

In principle the outer and the internal layer of the textile web can be built up and/or woven from

mixing fibers. From ecological view it is however favorable, if the outer and the internal layer from natural fibers are built up and/or woven. Accordingly the outer layer can consist of cotton. Preferably the outer layer is equipped with silicone or fluorine carbon hydrophobic, in order to keep rain and/or specking substances from outside away. The outer layer can be adapted to the respective requirements at its exterior with coloring, pressure or surface modification.

The internal layer can likewise consist of cotton or of microfiber. It has the functions to take up and to lead to the pile yarn the water vapor or also liquid of the skin and/or underwear, so that transpiring humans do not feel wetness or cold weather on the skin.

In the following a design example of the invention represented in the drawing is described; the only figure shows schematically a cross-section of a textile web according to invention. The textile web consists in its basic structure of a woven outer and inner layer 2 as well as in woven pile yarn in both layers which have wicking and capillary capability. The textile web is manufactured on a double work loom, so that the layers 1, 2 can be made of separate weft and warp threads with different binding, as is shown in the drawing....

The outer layer t consists of cotton and is equipped with silicone or fluorine carbon hydrophobic. It is not represented that the outer layer can be adapted to the respective requirements with coloring, pressure or surface modification. Anyhow the outer layer holds for 1 due to its hydrophobic equipment rain 4 or specking substances off.

The pile yarn 3 consist of wool with pronounced wicking or capillary effect.

The internal layer 2 consists likewise of cotton.

In addition, it can be built up from microfibers.

Water vapor 5, which is emitted by human skin 6 or underwear, will first taken up by the internal layer and there partly stored 2 avid, in order to the pile yarn 3 to be then transferred, which transports the water vapor or the moisture to the outer layer 1, from which the water vapor can withdraw and/or from the moisture can flash off.

Patent claims

1. Textile web from a woven, hydrophobic equipped outer layer, a middle, water vapor-permeable layer and a woven, water vapor-permeable internal layer, there· through characterized the fact that the outer layer (1) and the internal layer (2) by in-woven pile yarn (3), which wicking or capillary effect exhibits/[indicate]/[have], are connected.

2. Textile web after claim 1, characterized by the fact that the pile yarn (3) consist of wool.

3. Textile web after claim 1 or 2, characterized by the fact that the outer layer (1) consists of cotton.

4. Textile web after one of the claims 1 to 3, characterized by the fact that the outer layer (1) is equipped with silicone or fluorine carbon hydrophobic.

5. Textile web after one of the claims 1 to 4, characterized by the fact that the internal layer (2) consists of cotton.

6. Textile web after one of the claims 1 to 5, characterized by the fact that the internal layer (2) consists of microfiber.